

Date: Sun, 28 Aug 94 04:30:20 PDT
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V94 #256
To: Ham-Homebrew

Ham-Homebrew Digest Sun, 28 Aug 94 Volume 94 : Issue 256

Today's Topics:

2M to FM broadcast converter
AM Antenna question
Current FT-470 Mods List???
Dipoles & 50 ohm coax (2 msgs)
homebrew GPS radio front end
Plessey SL6440 mixer source
regenerative sets and selectivity
Wanted, PC board layout program

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sat, 27 Aug 1994 00:08:22 GMT
From: news.Hawaii.Edu!kahuna!jeffrey@ames.arpa
Subject: 2M to FM broadcast converter
To: ham-homebrew@ucsd.edu

In article <2E5E2B7F@msmail.uthscsa.edu> MUENZLERK@uthscsa.EDU (Muenzler, Kevin)
writes:

>Why would you want such a thing??

For the same reason I build my own transmitters (QRP CW): Just for
the fun of it. Recall I said in my article that the project
was just for fun and not to be taken too seriously (for I knew
I'd get a flame or two).

>Even if you built one you can't receive FM broadcast signals
>on a 2M FM receiver.

Wow. Where'd you get the impression this is what I wanted to do?
The converter is from 146 Mc to 100 Mc not 100 Mc to 146 Mc.

>The deviation is 75kHz wide! If would
>overload your dedicator.

Huh? What's a dedicator?

>You can't go the other way (receive
>2M on an FM broadcast receiver).

Yes I can. I've done it. So far I've been able to hear a &%*\$#@ paging
system. I'll tweek it down to 146 Mc - I believe it's in the low 150 Mc
range right now.

>It is designed for the 75kHz
>wide signals. You would have to crank the volume up all the
>way to hear the audio.

Yes, you would think so, but the audio level sounds fine. Don't forget
this converter is in front of a tuner - there's a seperate audio amp
that follows the tuner. In my article *I* mentioned the differences
in deviation - I thought it would be a problem but so far it's fine.

>You DEFINITELY CAN'T TRANSMIT
>ON BROADCAST BAND FM FROM YOUR 2M RIG THROUGH A TRANSVERTER!

You must have had a nightmare last night. This never was my intent.
I'll forward a copy of my original article to you so you can read
it more carefully.

I never mentioned a transverter, only a receiving converter. Know
the difference?

>For one, your rig is not FCC type accepted for that.
>Secondly, you are limited to 1 miliwatt (sic) (1000 microvolts)
>and 3' of antenna if you want to transmit on the FM broadcast
>band.

More hallucinations on your part. I've build a receiving converter
from 146 Mc to a 100 Mc I.F. Nothing was said about transmitting
on the FM bcst band. Also, you might want to peruse Part 15
concerning your statement above.

Also, watts and volts are different units: $P = I \times E$

Recall I said that this project was just for fun and not to be taken too seriously. Go have a beer, Kevin; it'll calm you down.

73,
Jeff NH6IL (ex WA6QIJ)

Date: Sat, 27 Aug 1994 00:43:26 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!cs.utexas.edu!
utnut!torn!uunet.ca!uunet.ca!nucleus.com!seanh@network.ucsd.edu
Subject: AM Antenna question
To: ham-homebrew@ucsd.edu

Thank you very much, to all those who responded to my question.

Most of you guys told me that in commercial AM receivers, the coil wound around the ferrite rod is used as the pickup antenna. In the radio I told you I was building, I have tried using such a coil in my design, except that this has not given me adequate results. I also tried one from a commercial receiver -- this loopstick was actually composed of two separate windings on a common ferrite core. Even when I tried to use either winding, I did not get adequate results. so there must be a certain way to hook up these coil properly...? Or perhaps my receiver does not have adequate gain to receive signals from these ferrite coil 'antennas'? Whenever I tried these ferrite coils I didnt even get a signal from the radio.

Thanks again for your help, you've already been quite helpful! If you could spare the time perhaps schematic diagrams could be useful, too.

- SVH

Date: 27 Aug 1994 18:37:01 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: Current FT-470 Mods List???
To: ham-homebrew@ucsd.edu

I would greatly appreciate a list of current mods for the Yaesu FT-470. I have one now but it is original vintage. Send reply or list via Email --tnx.

Date: 26 Aug 1994 00:51:32 GMT

From: hplntx!hpscit.sc.hp.com!rkarlqu@hplabs.hpl.hp.com
Subject: Dipoles & 50 ohm coax
To: ham-homebrew@ucsd.edu

In article <Cv44z2.3CM@icon.rose.hp.com>,
Greg Dolkas <greg@core.rose.hp.com> wrote:
>

>A resonant dipole antenna (yes, in the mythical Free Space) has an impedance
>of 70-odd ohms. If you hook it directly to a 50 ohm coax you will see a
>1.5:1 SWR. You can trim the antenna to make it look like 50 ohms, but now

>So, all you Dipole Experts, what is the right answer? Yes, this is somewhat
>accedemic, since you never really have a mythical Free Space antenna, but
>at least you will be starting from a technically sound design.
>

>Greg KD6KGW

It isn't just that you're not in free space. The $73 + j40$ ohms or whatever
it is is the impedance for a *infinitesimally thin* dipole. Real dipoles
are well down into the 60 ohm's or even the 50's.

Another error is end effect, which also helps to lower the input impedance
(like end loading would).

So the actual VSWR is only 1.2 or 1.3 to 1. Hardly worth worrying about.

If it's really important to you to get a 50 ohm input impedance, cut
your dipole about 10 to 15% short of a half wave and put in loading coils
to resonate it. Then you can hit 50 ohms exactly.

Rick N6RK
rkarlqu@scd.hp.com

Date: Sat, 27 Aug 1994 03:33:28 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!library.ucla.edu!psgrain!qiclab!egreen!
egreen!jmollan@network.ucsd.edu
Subject: Dipoles & 50 ohm coax
To: ham-homebrew@ucsd.edu

Easy, just turn the dipole into an inverted vee. As the ends are brought
down, the impedance will approach 50 ohms +-.

73, John
AE7P

Date: 28 Aug 1994 02:23:05 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: homebrew GPS radio front end
To: ham-homebrew@ucsd.edu

In article <1994Aug3.214148.16052@njitgw.njit.edu>, ken@helios.njit.edu
(ken ng) writes:

why homebrew? Plessey has a front end chip that TAKES RF IN AND SPIT SIGN
AND MAGNITUDE DATA OUT.

Date: 28 Aug 1994 02:20:01 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: Plessey SL6440 mixer source
To: ham-homebrew@ucsd.edu

In article <Csw0Az.pM@SSD.intel.com>, rlt@ssd.intel.com (Roger Traylor)
writes:

send me an e-mail request. I think this part has been discontinued but if
not i can get you samples.

Date: 26 Aug 94 12:47:37 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!usc!
elroy.jpl.nasa.gov!netline-fddi.jpl.nasa.gov!nntp-server.caltech.edu!
news.claremont.edu!bridge2!Thoth!peter@network.ucsd.edu
Subject: regenerative sets and selectivity
To: ham-homebrew@ucsd.edu

There's a nice cheap design for a 3 transistor 5 - 15 Mhz regenerativ
receiver in this week's EDN (8/18/94). It's in the Design Ideas
section, page 98. Charles Kitchin of Analog Devices is the author.

Peter Simpson, KA1AXY
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(508) 393-6934 fax

I speak only for myself, 3Com doesn't pay me to speak for them, so I don't.

Date: 26 Aug 1994 20:25:44 GMT

From: ihnp4.ucsd.edu!newshub.nosc.mil!crash!news.sprintlink.net!tequesta.gate.net!
inca.gate.net!anto@network.ucsd.edu
Subject: Wanted, PC board layout program
To: ham-homebrew@ucsd.edu

Ed Bathgate (ed@fore.com) wrote:

: I have a need to have some pc boards made by a "board shop" and
: want a pc layout program that will run on IBM compatable.

: Absolute requirements are :

: Gerber file generation
: drilling coordinates file (cnc preferable)
: do photo positive & negative images on laserjet. (for iron on prototyping)
: Run on a 386 pc with a math co.
: Under \$500

: Anybody have opinions on pc board programs?

: Has anybody compiled previous posts on pc board programs?

: 73

: Ed N3SD0
: Ed@fore.com

I use a relatively inexpensive program marketed by a company
called Ohio Automation Inc. in Athens, OH. It will do everything
you ask plus schematic capture for \$195.00. I've been very happy
with it. They can be reached at (614)592-1810.

--

Nigel Kirlew, N4TKC
anto@gate.net

End of Ham-Homebrew Digest V94 #256
